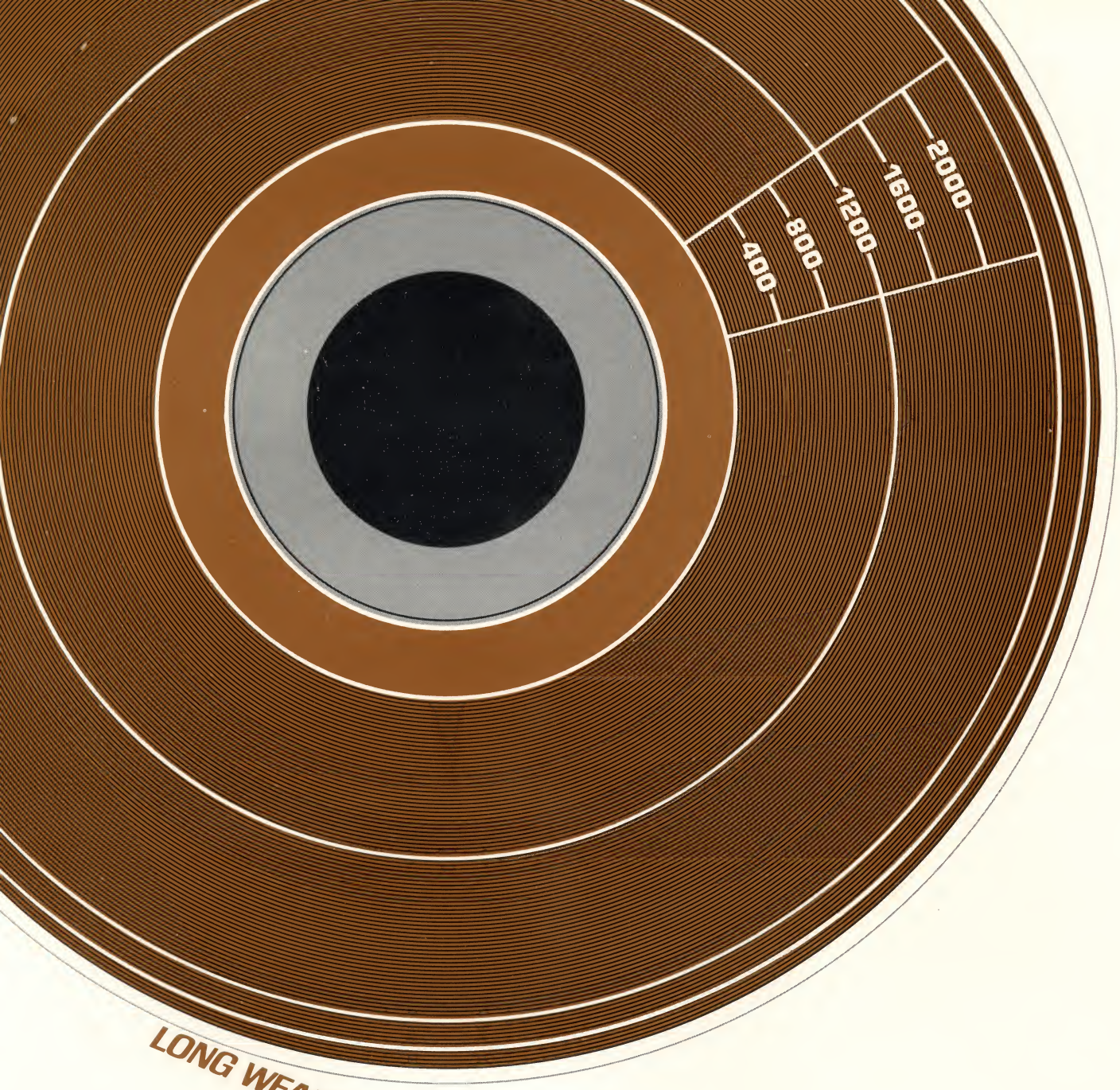

LONG WEARING COMPUTER TAPES WITH THERMOSETTING BINDER SYSTEM

MICRONETIC 404

MICRØNETIC

TECHNICAL DATA

PHYSICAL CHARACTERISTICS:†

Base Material	Mylar*	Yield Force	10 lbs. min.
Base Thickness	1.5 Mil (nominal)	Elongation at Break	100%
Coating Thickness	400 Microinches	Coefficient of Expansion	1.5×10^{-5} (per degree F.)
Width	.498″ ± .002″		
Length	2400′ + 50′ — 0′	Longitudinal Curvature	⅛″ per 36″ max.

MAGNETIC CHARACTERISTICS:†

Coercivity	265 ± 10 oersteds	Signal Dropouts	None below 50% of Average Signal Level
Remanence	1.35 Maxwells per ½″	Noise Signals	None greater than 10% of Average Signal Level
Retentivity	1200 Gauss		
Squareness Factor (B_r : B_s)	.78	Layer to Layer Signal Transfer	1% Aug Peak Output Max.
Average Signal Level (Reel to Reel)	±5%		

*Dupont trademark for Polyester Film

†Physical and magnetic characteristics tested per Government Specifications MIL-WT-0070, FED-STD-406, GSFC Spec. S-533-P-1 and applicable ASTM

404 Long wearing COMPUTER TAPES with THERMOSETTING BINDER SYSTEM

TECHNICAL BRIEF

Thermosetting Binder System

Micronetic 404 tape has a patented thermosetting binder system which has many advantages over the thermoplastic coatings used in other computer tapes.

By definition, thermoplastic plastics have a tendency to soften with heat, whereas, thermosetting plastics do not. Therefore, Micronetic 404 tape does not experience a degradation of its physical properties due to heat generated in successive passes over the head. This means there is no oxide particle separation (self-dirt), the major cause of signal dropout. For the same reason, there is a greater resistance to foreign particle imbedment. In addition to exceptional long-wear characteristics, the thermosetting binder system retains its flexibility after years of storage, making Micronetic 404 an ideal file tape.

Microfinished Surface

Prior to certification and after slitting, each reel of Micronetic 404 tape is then mechanically polished over its entire length, producing a super-fine finish and removing any slitting fuzz which might otherwise result in edge wear. This mirror-like finish contributes substantially to better head-to-tape intimacy with a corresponding reduction in head wear, a lower affinity for foreign particles and a reduction in noise level and print-through.

Superior Dispersion

The Micronetic 404 oxide/binder ratio has been selected to provide optimum wear characteristics with no sacrifice in the necessary signal level. When compared with tapes containing a higher oxide loading, this superior dispersion combined with exceptional coating uniformity results in significantly lower noise levels and a negligible amount of print-through.

Error Free Certification

Each reel of Micronetic 404 tape is individually tested and certified to be 100% fault free. The certification process is accomplished by actually recording over the entire length of tape at a density of either 556 or 800 BPI and subsequently reading for dropouts. A dropout is defined as a 50% loss in signal level from average peak output. If a single permanent dropout is detected, the reel in question is rejected. Statistical sampling techniques are *not* employed —every reel of Micronetic 404 tape is thoroughly tested.

Guarantee of Quality

Every reel of Micronetic 404 computer tape is backed by a written guarantee conforming to the highest industry standards. This guarantee insures the user that no sale is final until superior performance is demonstrated on his equipment.

The Micronetic Story Micronetic can trace the experience of its research staff back to the period immediately following World War II when information was first made available on German advances in magnetic tape recording. Following this start, the combined experience of our staff encompassed virtually every phase of research and development in the field of magnetic elements; specifically involving the manufacturing of cast, extruded, calendered, and coated recording media in the communications and data-processing field.

The formal organization of the Micronetic Corporation began as a direct result of two basic patents in the magnetic recording field:

1. U.S. Patent #2954303—covering the production of ferro magnetic oxide. This iron oxide, because of its non-porous, extremely small particle size, represented a significant improvement in loading density and high resolution and is now used in all high-packing-density computer tapes.

2. U.S. Patent #3098761—covering the inclusion of diamagnetic material in the binder system. This patent has the highest significance in instrumentation recording where extremely short-wave lengths are involved.

Patents relating to magnetic performance are only part of the Micronetic story. Development of a heat-resistant thermo-setting binder was considered a prerequisite in production of a precision tape with wear characteristics exceeding the industry's highest standards. The challenge to produce a superior-quality, low-cost computer tape was made through extensive materials research followed by the most careful design and construction of specialized plant facilities. It was recognized early, that in the manufacture of precision magnetic tape, the major cost is in scrappage at final inspection or certification. Micronetic's aim, therefore, was to produce from an automated, high-speed coating line, a tape which was consistently fault free. To accomplish this with a thermo-setting binder system meant a radical departure from conventional techniques. Rheological studies showed that the very delicate dispersion had to be handled at a precisely controlled temperature and humidity throughout the early steps of the operation. White-room standards were, of course, necessary. Most important, however, complete quality checks are made at each stage of processing, rather than waiting until the tape is ready for certification.

Through this effort, Micronetic Corporation is able to bring you the best magnetic tapes today and strives through research and development to bring you a better tape tomorrow.

MICRØNETIC CORPORATION

3127 COLVIN STREET/ALEXANDRIA, VIRGINIA 22314
AREA CODE 703 • 549-3033

YES! I WOULD LIKE TO KNOW MORE ABOUT MICRØNETIC 404 COMPUTER TAPE:

☐ Please have your Micronetic representative telephone me for an appointment (_____AM; _____PM).

☐ I would like to have one reel of Micronetic 404 for independent testing. We currently have_____reels of computer tape in use.

☐ I need_____additional copies of your literature for our files.

NAME_____

TITLE_____

COMPANY_____

ADDRESS_____

CITY_____

STATE_____ **ZIP**_____

FIRST CLASS
PERMIT NO. 768
ALEXANDRIA, VIRGINIA

BUSINESS REPLY MAIL NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

MICRONETIC CORPORATION

3127 COLVIN STREET
ALEXANDRIA, VIRGINIA 22314

3127 COLVIN STREET / ALEXANDRIA, VIRGINIA 22314 / AREA CODE 703-549-3033

MICRONETIC CORPORATION

December 14, 1965

Mr. T. Nelson
Box 1546
Poughkeepsie
New York 12603

Dear Mr. Nelson:

Thank you very much for your inquiry about Micronetic 404 computer tape. Enclosed please find our latest catalog.

As you know, all computer tapes on the market today consist of:

1. Physical and magnetic properties.
2. Oxide coating.
3. Mylar film base.
4. Binder system.

1. The physical and magnetic properties standards are set by the computer manufacturers, so for all practical purposes, these are the same in all tapes.

2. All computer tapes today use high resolution gamma ferric oxide, so although Micronetic can claim no significant difference here, it is interesting to note that the same scientist who developed and patented high resolution gamma ferric oxide is the developer of Micronetic computer tape.

3. All computer tapes use the same Dupont 1.5 mil Mylar for their base film.

4. The binder system - This is where Micronetic differs from all other computer tapes. Micronetic computer tape has a thermo-setting binder system; whereas, all other tapes use a thermo-plastic binder system. This new binder system has two basic advantages over the old thermo-plastics; namely, it is highly heat resistant and abrasion resistant. Now what this means to you, the

user, is that when the tape is zipping by the head, it will not soften due to the heat of friction nor will particles abrade off the surface and reimbed themselves in the softened coating. As you know, this thermal degradation and particle abrasion is, by far, the major, if not the only cause of computer tape failure.

Among some of the other advantages of Micronetic computer tape is the fact that we microfinish the entire surface of the tape after slitting. In this way, we eliminate any edge fuzz; and of course, the smoother the tape, the better the head to tape intimacy and the greater the abrasion resistance. Another plus factor, is Micronetic's superior dispersion. What we mean by this is that we have the optimum ration between the oxide and the binder system giving Micronetic an extremely uniform coating with very low noise level and a negligible amount of print through.

Micronetic 404 tape is 100% certified at 800 B.P.I.'s. We use no statistical certifying. With each and every reel, you get a written guarantee which conforms to the highest industry standards. Our guarantee states that you will have less than 15 write skips in any two consecutive passes for 100 passes and/or three years. In addition to this regular guarantee, we give what we call a "New Customer Guarantee," which states very simply that you, as the customer, will be fully satisfied with your first order or you will be able to return it for a full money refund and/or an exchange at your discretion.

The price of Micronetic tape is very competitive with any price on the market today. A copy of our price list is enclosed.

To give you a little background as to how Micronetic got into business of producing computer tape, our background goes back 15 years in research and development in the magnetic recording field. Mr. H. Clifford Wescott, the developer of Micronetic tape, holds two major patents in the magnetic recording field. U.S. Patent No. 2954303, which covers the production of ferro-magnetic oxide. This is the high resolution gamma ferric oxide that is used in all computer tapes today. IBM, Ampex, Memory, Audio Devices - each and every tape manufacturer uses this oxide in their coating. Mr. Wescott's other patent covers diamagnetic materials; although this has little significance in the computer tape field, it has the highest significance in instrumentation recording.

This same Mr. Wescott has developed a new tougher binder system for computer tape; namely, a thermo-setting binder system which will wear three to five times longer than anything on the market today and at a very competitive price.

We would very much welcome the opportunity to sit down with you and discuss a program whereby you could evaluate Micronetic 404 computer tape under your own operating conditions. For more information, please give me a call at 703-549-3033 or mail in the enclosed reply card.

Yours very truly,

Michael Cetta

Michael Cetta
Vice President

MC/jcm

3127 COLVIN STREET / ALEXANDRIA, VIRGINIA 22314 / AREA CODE 703-549-3033

MICRONETIC CORPORATION

PRICE LIST

IBM Compatible Computer Tape, heavy duty, 2400 feet, solid flange reel (aluminum hub) and case, fully tested at 800 BPI.

Part Number	Quantity	Price per Reel
404-8	1 - 49	$ 29.00
	50 - 149	27.00
	150 - 499	25.25
	500 - 999	24.00
	1000 up	23.50

IBM Compatible Computer Tape, heavy duty, 2400 feet, solid flange reel (aluminum hub) and case, fully tested at 556 BPI

Part Number	Quantity	Price per Reel
404-5	1 - 49	$ 28.00
	50 - 149	26.00
	150 - 499	24.25
	500 - 999	23.00
	1000 up	22.50

Identification rings for color-coding available in white, blue, green, red, yellow - unless otherwise specified, white will be shipped.

TERMS: 2%, 10 days, net 30 days, FOB destination

DELIVERY: 10 to 50 days, depending on size of orders.

Prices subject to change without notice.